DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-019453
Date Inspected: 17-Jan-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 630
OSM Departure Time: 1500
Location: Job Site

CWI Name:	Fred Von Hoff and Pat Swain			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 8W/9W side plate ‘C1’ inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding cover pass on the splice butt joint. The welder was observed perform automatic welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System heater blankets located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) Fred Von Hoff was noted monitoring the welding parameters of the welder. At the end of the shift, cover pass welding at this location was completed except the area 0mm to 1000mm wherein the Bug-o track mounted nozzle holder has limited access.

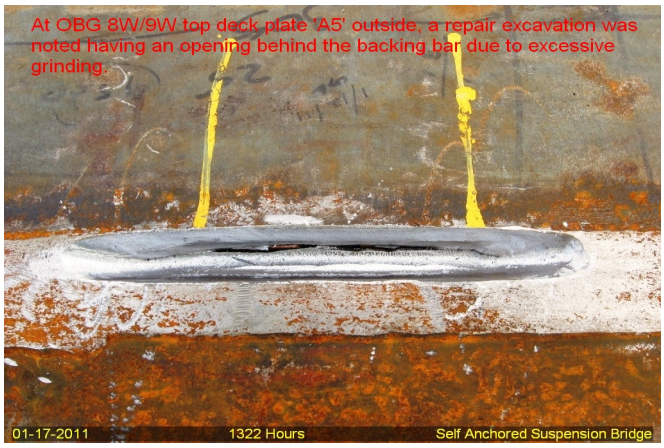
At OBG 8W/9W top deck plate ‘A5’ outside, QA randomly observed ABF/JV qualified welder Wai Kitlai continuing to perform CJP repair welding. The welder was noted welding in 1G (Flat) position utilizing Shielded Metal Arc Welding (SMAW) with 5/32” and 1/8” diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1001 Repairs. The welding repairs were excavated to a boat shape profile and were tested with Magnetic Particle Testing (MT) prior welding. During welding, ABF QC Pat Swain was noted monitoring the welder and his welding parameters. Welding parameter measured at the time

of welding were 165 amperes and 135 Amperes respectively on the electrodes mentioned above which appears in compliance to the WPS. The locations of the repairs were noted below;

Loc. Y-dimension Length Width Depth Remarks
1. A5 3710mm 530mm 21mm 22mm Completed
2. A5* 2800mm 180mm 22mm 14mm Excavated
*Note: This excavation/location has a 3 inches long opening behind the backing bar edge due to excessive grinding during excavation of the (UT) weld defect. QA has informed ABF QC Pat Swain to initiate repair request for the base metal repair.

At OBG 8W/9W edge plate ‘F’ to side plate ‘E’ inside bottom corner transition, ABF welder Jorge Lopez was observed performing 2G/2F SMAW welding fill pass to cover pass on the joint. The welder was noted using 1/8” diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040A. During the shift, the welder has completed welding the bottom corner transition and has moved to the other edge plate ‘B’ and started back gouging the backing bar removal using carbon air arc. During welding, ABF Quality Control (QC) Fred Von Hoff was noted monitoring the welding parameters of the welder. At the end of the shift, welder was noted grinding the groove of the back gouging excavation.

At OBG 9E/10E side plate ‘E’ inside, this QA performed verification on the fit up of the splice butt joint. Majority of the length of the joint was measured less than 2mm misalignment except on three locations wherein the following measurements were noted;
1. E1 - (0mm to 60mm) 8mm misalignment
2. E1 - (60mm to 90mm) 6mm misalignment
3. E2 - (4800mm to 4980mm) 3mm misalignment
These measurements have been recorded by ABF/QC William Sherwood and accordingly, it will be submitted to Caltrans for approval prior welding. At the moment, the joint is still idle and the fit up is being held by the fitting gears installed at the other side of the plate.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy, 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer